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## MAPLE SUGAR AND THE INDIANS.

BY A. F. CHAMBERLAIN.

Since the article on "The maple amongst the Algonkian tribes" appeared\* I have come across some very interesting evidence not previously noted. In the "Gentleman's Magazine" for 1765,† we find the curious information that "The *Americans* have discovered a method of making sugar from a liquor procured by boring the maple tree." In the first volume of the "Philosophical Magazine"‡ there is printed a letter from Dr. Robinson to Mr. Ray, bearing date of "London, March 10, 1684," which is as follows:

"I have enclosed you some sugar of the first boiling got from the juice of the wounded maple. Mr. Ashton, Secretary to the Royal Society, presented it to me. 'Twas sent from Canada, where the natives prepare it from the said juice; eight pints yielding commonly a pound of sugar. The Indians have practiced it time out of mind. The French begin now to refine it and to turn it to much advantage. If you have any of these trees by you, could you not make the trial, proceeding as with the sugar cane?"

In his reply, which is dated "Black Notley, April 1, 1684," Mr. Ray says: "Yours of the 10th instant I received and therein an enclosed specimen of the Canada sugar, a thing to me strange and before unheard of." Mr. Ray also mentions that he had a friend experiment for him, in the way suggested, with some success.

The important fact to be noticed here is that as early as 1684 we have the distinct statement regarding maple-sugar making, that "the Indians have practiced it time out of mind."

In Vol. XV (1684-'5) of the "Philosophical Transactions of the Royal Society"§ there is "An account of a sort of sugar made of the juice of the maple in Canada," presumably from the pen of Mr. Ashton above referred to. This brief note is as follows:

\* Vol. IV, pp. 39-43.

† Vol. XXXV, p. 439.

‡ Vol. I, pp. 322-323, "Of an attempt to make the maple sugar above an hundred years ago."

§ No. 171, May 20, 1685, p. 988.

"The savages of *Canada*, in the time that the sap rises in the *maple*, make an incision in the tree, by which it runs out; and after they have evaporated eight pounds of the liquor there remains one pound as sweet and as much *sugar* as that which is got out of the canes; part of the same *sugar* is sent to be refined at Roven.

The savages here have practiced this art longer than any now living among them can remember. There is made with this *sugar* a very good syrup of maiden hair and other capillary plants, which is used in *France*."

Here we have the very important statement made in 1684 that "the savages have practiced this art longer than any now living among them can remember." It would appear from the evidence of Mr. Ashton and Dr. Robinson that the statement that the French in Canada learned the art of maple-sugar making from the Indians is true.

There is also some additional evidence regarding the history of maple sugar in New England. In Vol. XXXI of the "Philosophical Transactions of the Royal Society"/\* we find "an account of the method of making sugar from the juice of the maple here in New England," by Paul Dudley, F. R. S.

Following is part of Mr. Dudley's interesting description:

"Maple sugar is made of the juice of upland maple, or maple trees that grow on the highlands. You box the tree, as we call it—*i. e.*, make a hole with an axe or chisel into the side of the tree, within a foot of the ground. The box you make may hold about a pint, and therefore it must shelve inward or toward the bottom of the tree. You must also bark the tree above the box to steer or direct the juice to the box.

"You must also tap the tree with a small gimlet below your box, so as to draw the liquor off. When you have pierced or tapped your tree or box you put in a reed or pipe or a bit of cedar scored with a channel, and put a bowl, tray, or small cask at the foot of the tree to receive your liquor, and so tend the vessels as they are full." This method of procedure in 1720 may be compared with that now in use, and that in use amongst the various Indian tribes.

Ben. Perley Poore, in an interesting sketch of the "History of the Agriculture of the United States,"† says of the New England

\* Vol. XXXI (1720-1721); January, April 1720, pp. 27-28.

† Report of Comm. of Agriculture, 1866, pp. 498-527.

Indians : "From the sap of the maple tree they made a coarse-grained sugar, which, when mixed with freshly pounded "sup-paun" and seasoned with dried whortleberries, was baked into a dainty dish for high festivals" (page 500).

Descriptions of the modern method of maple-sugar making in Vermont, "the maple-sugar State," may be found in the reports for 1867\* and 1873,† and interesting statistics of maple-sugar production in that for 1876.‡

In the report for 1862§ Mr. C. T. Alvord, of Wilmington, Vermont, has an interesting paper on "the manufacture of maple sugar." He states :

"From the earliest settlement of New England to the present time the manufacture of sugar from the sap of the maple tree for domestic purposes has been carried on as one of the branches of agricultural pursuit" (page 394).

In the interesting description which he gives of the method of manufacture (pages 397-405) the following passages deserve particular notice :

"In some instances the syrup was strained through *hemlock* boughs and then boiled down to sugar" (page 398).

The way to tell when the sugar is boiled enough is "by having a dish of snow and putting some of the hot sugar on the snow. If it does not run into the snow, but cools in the form of wax on the surface of the snow, it is done enough to be put in the tubs to drain" (page 403) ||.

The comparison of the earliest recorded methods employed by white men and by Indians seems to lead to the same conclusion as the linguistic evidence already adduced, and to strengthen the belief that the American Indian first manufactured maple sugar.

\* P. 246.

† Pp. 473-5

‡ Pp. 159-160.

§ Pp. 394-405.

|| Compare Report of Comm. of Agric. 1870, p. 412, where it is said of some Western Indians : "Sugar-making forms a sort of Indian carnival, and boiling candy and pouring it out on the snow to cool is the pastime of the children."

KAHASTINE'S OR THE FIRE-DRAGON.—Among the unlettered Iroquois there is still current a belief in the existence of enormous and tri-form monsters, having the head, breast, and shoulders of a panther, the wings and claws of an eagle, and the body of a huge serpent.

Its mouth and eyes are said to emit fire and balls of light, and lambent flames are reputed to play over its entire length, which is said to be about two bow-shots; its other proportions are such as to correspond with its vast length.

Its abiding places are at the bottom of great lakes, and its mode of locomotion is by flying. Its time of flight is at night, making its way across the country from one lake to another. These people fancy that they can hear the waters boil and siss when the flame-enveloped monster plunges into a neighboring lake. In their ignorance of the facts of astronomy, these people believe that eclipses of the sun and moon are caused by these monsters attempting to feed-upon or swallow the planet in eclipse.

To prevent a catastrophe so dire as the loss of one or the other of these their celestial ancestors (for the sun is their elder brother and the moon their grandmother), the terror-stricken people shout, shoot arrows at the supposed monster, urge their dogs to bay and howl at it, and beat drums and kettles to frighten the demon away.

The origin of this myth is traceable to the meteor or falling star. The Tiskaroran name of it is *Kahasti'në's*; its Mohawk name *Kahaseri'ne's*, and its Onondagan was formerly *Kahasëñdyetha'*.

In these sentences or sentence-words the initial *ka* is the neuter zoic pronoun "it;" the nominal base is the stem of *ohä'sera'*, "a light or flame," from an original *ohathe'sera'*, "light-giving thing." The verb in the first two is from *-i n e'*, "to move or travel," while that of the last *-ëñdyetha'*, denotes "to cause, to emit, or shoot." Here we have evidence that the "shooting light or star" is the origin of the fabulous fire-dragon. The Onondagan name is now applied to the lion of the eastern hemisphere.

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